Central Valley Salmonid Satellite Project Work Team:
Juvenile Monitoring
Meeting Notes from October 7, 2008
Yolo Bypass Wildlife Area, Davis, CA 10:00

Participants: Bill Poytress (Chair; USFWS), Jim Early (USFWS), Beth Campbell (USFWS), David Colby (USFWS), Robyn Bilski (CDWR), Kellie Whitton (USFWS), Jason Shillam (EBMUD), Clark Watry (Cramer Inc.), RJ Bottaro (USFWS), Marie Schrecengost (USFWS), David Trachtenbarg (USFWS), Pete Hrodey (USFWS), Jack Ingram (USFWS), Robert Chase (USBR), JD Wikert (USFWS) and James Ober (CDWR).

I. Introductions and Announcements:

Welcome newest participants: Pete Hrodey of the Stockton Fish and Wildlife Office (STFWO), Beth Campbell of the Anadromous Fish Restoration Program (STFWO), James Ober (CDWR), Robert Chase (USBR) and RJ Bottaro, Marie Schrecengost, and David Trachtenbarg of the Red Bluff Fish and Wildlife Office (RBFWO).

Michelle Workmann, president elect for 2009 Cal-Neva Chapter annual meeting in Santa Rosa, CA, has requested a JMPWT member(s) consider chairing a session on juvenile monitoring or presenting information at the meeting. Possible session discussed included presentations about juvenile moniroting in 2004 and 2005 (subsequent declines in adult abundance), hatchery contribution rates from newly implemented fractional marking program, and an RST session. Michelle also requests anyone interested in helping to organize the event to contact her at mworkman@ebmud.com or 209.365.1486. Assistance is needed for the following committees: artwork, program, local arrangements, program guide development and production, AV/Computers, fundraising, raffle, socials and catering and spawning run.

Fisheries and Wildlife Biologist 1 position open at EBMUD, applications due 10/24/08 see www.EBMUD.com

CALFED Science conference October 22-24, multiple JMPWT participants will be presenting via poster and oral presentations. JD Wikert indicated that judges are needed for CALFED student posters, contact JD for details.

Sturgeon PWT has taken shape, if interested, email zach_jackson@fws.gov for more details.

II. Modify /Adopt Agenda: Adopted as proposed.

III. Amend /Approve prior meeting notes (6/5/08): No new comments, notes finalized and soon available at the IEP Juvenile Monitoring PWT website. **(http://www.iep.ca.gov/central_valley_salmon/jm/notes.html)**

IV. Program Updates:

Bill Poytress (USFWS): Red Bluff Diversion Dam (RBDD) rotary trapping is occurring with 4 traps currently and is scheduled to continue through June of 2009. An amendment workshop in November of 2008 will be attended to determine if a 9 month no cost extension will be granted allowing the project to continue operations into 2010. Sampling consists primarily of low numbers of winter run, passage similar to last year's low juvenile abundance levels.

Clark Watry (Cramer Inc): Rotary traps are scheduled to begin sampling in January on the Stanislaus River at Caswell Park. The Merced River trap will likely begin sampling in February or March aimed primarily at smolt outmigration. The recent years' physiology and wildstock tagging are tentatively on hold due to low numbers of fish expected to be sampled with the low return of adults.

Robert Chase (USBR): Red Bluff Diversion Dam issues hopefully resolved by next irrigation/pumping season. Work continues for OCAP and some pumping plant trials will be conducted this fall.

Pete Hrodey (USFWS): Trawls are planned for the season, but effort may be reduced if catch of delta smelt or longfin smelt is too great. A new boat is being built and when completed will be used in a comparison study with the Whitesel, current Chipps' Isalnd mid-water trawl boat. The STFWO will also be participating in a collaborative effort with the USGS and others performing a large-scale acoustic monitoring effort using outmigrating Chinook. No coded wire tag studies planned for the Delta Action 8 experiments this year; acoustics will be used instead.

Jim Earley (USFWS): Nearly 200 spring-Chinook adults and 70 redds have been observed in the upper reaches of Clear Creek. The upper 5' rotary trap will be deployed in mid-November or early December to estimate abundance of juvenile production. Possibility of upper trap relocation this year since ~25% of the redds observed have been below the upper trap site.

Kellie Whitton (USFWS): Battle Creek juvenile monitoring will commence at about the same time as the Clear Creek trapping. They may need to rely on fish from the hatchery to conduct efficiency trials due to the low adult returns expected this season. Comparison study of wild versus hatchery fish trap efficiencies may be put on hold as a result.

Jason Shillam (EBMUD): Two rotary traps will be deployed above and below the Woodbridge dam, respectively. They plan to sample December through June. Wildstock tagging of fish is scheduled to occur at both sample locations. Thus far 2 returning adult Chinook salmon have been seen through video monitoring at Woodbridge Dam.

Robyn Bilski (CDWR): One rotary trap on the Feather River in low flow channel (RM 61) and two in high flow channel (move to RM 26 above confluence with Yuba, possibly) starting early November. CDWR plans to CWT fish for mark-recapture survival studies. Additionally, a report covering 2005-2007 is in progress. The fourth trap acquisition is on hold currently and the office plans to move to Chico in the near future.

Beth Campbell (USFWS): Yuba RST work to be conducted by CDFG. A new site above Daguerre Dam is proposed. Additionally, a sampling device (possible Fyke) is being planned for the Hallwood-Cordura unscreened diversion to sample entrained fishes.

V. Group Discussion Topic: Review of 2004/2005 Fall Run Juvenile Outmigration Data.

Clark Watry (Cramer Inc) presented information on the Merced and Stanislaus sampling of juvenile outmigrants. Merced River juvenile abundance estimates were ~95,000 and 14,000 individuals for 2007 and 2008, respectively. Flow patterns were nearly inverse of each other between years and the outmigrant distribution data is very different between years but consisted primarily of smolts. As for the Stanislaus, the 2004 passage estimate was higher than the prior 3 years and 2005 was slightly less than 2004. Clark noted that fewerfemale adults returned in 2004 even though escapement numbers were similar to 2003 and 2005. On average, females were smaller in 2004 compared to mean female lengths in 2003, 2005, and 2006, which may have affected production, but otherwise little indication that in-river juvenile production or survival was abnormal during these years.

Jason Shillam (EBMUD) presented information on adult and juvenile monitoring of the Mokelumne from 2003-2007. Adult returns during 2004 and 2005 were 11,944, and 16,140 the highest of the 5 years presented. Adult returns in 2007 were 1,519, the lowest of the reporting period. Average escapement since 1940 is ~4,000 adults. River temperatures during the spawning period in 2004 and 2005 were < 16.5 C for the period. Juvenile abundance was 432,874 and 1,187,553, also the highest of the 5 year reporting period. Hatchery conditions did not appear to be detrimental to hatchery fish survival and overall, there appeared to be no in-river juvenile production or survival problems of great concern.

Kellie Whitton (USFWS) presented data from lower Battle Creek for the period 2001-2004 noting that 2004 was the highest fall Chinook juvenile abundance estimate of the period.

Bill Poytress (USFWS) presented 2004 winter-run and fall-run information from the RBDD RST project. Also included was information on Knight's Landing catch provided by Robert Vincik (CDFG). It was noted that 2004 winter-run abundance was low relative

to 2002 and 2003 yet the estimate was 3.5 million juveniles passing RBDD. He noted that winter-run typically pass RBDD by the end of December (2004) and Knight's Landing sees a peak of winter-run capture in December and January typically. Sacramento River outflow during this year peaked at least three times resulting in flooding of the bypasses for several days in January, April, and May. Delta Outlfow exceeded 100,000 cfs on one event at the end of May. Typically juvenile winter-run are out of the Golden Gate by this time. Juvenile survival of hatchery winter-run showed a group survival index to Chipps Island in the "good range". Juvenile production of winter-run was at or slightly above predicted levels based on winter-run female carcasses. Little indication of South Delta Operations impact to be above "normal" levels.

As for fall run, 2004 estimated passage was the lowest of the period between 2002 and 2006 with an estimate of 11 million juveniles passing RBDD. Knight's Landing data indicated the highest year on record in terms of fall run catch. Overall, no indication of in-river production or survival anomalies for the given number of adults returning that year.

Robyn Bilski (CDWR) reported that 2004/2005 juvenile abundance was the highest on record in the Feather River.

Jim Earley (USFWS) presented information on Clear Creek noting that fall run escapement was ~ 6,000 fish, but nearly 6 million juveniles were estimated in passage which is one of the highest values in recent years. 2005 estimated passage was only ~3 million juveniles although adult escapement was nearly 15,000 individuals. High flows and possible redd scour may have occurred in that year. As for spring-run Clear Creek has seen nearly double the adults compared to the four years prior. Interestingly, spring Chinook juvenile production has been relatively constant between 105,000 and 130,000 for the period 2003-2007, despite the increase in adults in recent years.

Robert Chase (USBR) reported on entrainment data at the RBDD pumping plant. He noted 227 fall run entrained in 2004 as compared to 105 in 2008, a 46% decrease.

VI. Next Meeting Date and Topic.

The next meeting is tentatively scheduled for January 14, 2009 at the Yolo Bypass Wildlife Area. The topic will be developed in the coming months and will cover one of the following topics: Juvenile Steelhead Monitoring, AFRP juvenile species monitoring, hatchery versus wild fish behavior, an joint meeting with the adult PWT, possible topic determined by the CV salmonid parent team (i.e., input from parent team).

Feel free to contact the chair to provide input.